

**THE FEDERAL HOSPITAL INSURANCE TRUST FUND**

---

**COMMUNICATION**

**FROM**

**THE BOARD OF TRUSTEES OF THE FEDERAL  
HOSPITAL INSURANCE TRUST FUND**

**TRANSMITTING**

**THE 1992 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE  
FEDERAL HOSPITAL INSURANCE TRUST FUND, PURSUANT TO 42  
U.S.C. 1395i(b)**



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**1992 ANNUAL REPORT OF  
THE BOARD OF TRUSTEES OF THE  
FEDERAL HOSPITAL INSURANCE  
TRUST FUND**

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TRUST FUND**

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**Transmitting**

**THE 1992 ANNUAL REPORT OF THE BOARD,  
PURSUANT TO  
SECTION 1817(b) OF THE SOCIAL SECURITY ACT,  
AS AMENDED**

LETTER OF TRANSMITTAL

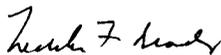
BOARD OF TRUSTEES OF THE  
FEDERAL HOSPITAL INSURANCE TRUST FUND  
Washington, D.C., April 2, 1992

HONORABLE THOMAS S. FOLEY  
Speaker of the House of Representatives  
Washington, D.C.

HONORABLE DAN QUAYLE  
President of the Senate  
Washington, D.C.

GENTLEMEN: We have the honor of transmitting to you the 1992 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund (the 27th such report), in compliance with the provisions of section 1817(b) of the Social Security Act.

Respectfully,



NICHOLAS F. BRADY,  
*Secretary of the Treasury, and  
Managing Trustee of the Trust Fund*



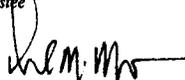
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*Secretary of Labor, and Trustee*



LOUIS W. SULLIVAN, M.D.,  
*Secretary of Health and Human Services,  
and Trustee*



STAMFORD G. ROSS,  
*Trustee*



DAVID M. WALKER,  
*Trustee*



MICHAEL HUDSON,  
*Acting Administrator of the Health Care  
Financing Administration, and  
Secretary, Board of Trustees*

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## **I. OVERVIEW**

### **A. SUMMARY**

#### **1. Operations of the Hospital Insurance Program**

The hospital insurance (HI) program pays for inpatient hospital care and other related care for those age 65 and over, and for the long-term disabled. In calendar year 1991, HI covered about 31 million aged and about 3 million disabled enrollees at a cost of \$72.6 billion. Of this amount, \$71.5 billion was for benefit payments and \$1.0 billion, 1.4 percent of total disbursements, was for administrative expenses.

The HI program is primarily financed by payroll taxes, with the taxes paid by current workers and their employers used mainly to pay benefits for current beneficiaries. Income not currently needed to pay benefits and related expenses is held in the HI trust fund. The assets of the fund may not be used for any other purpose. While in the fund, the assets are invested in certain interest-bearing obligations of the U.S. Government. These obligations are backed by the full faith and credit of the United States Government.

The payroll taxes of 137 million workers and their employers provided the primary source of financing for the HI program in calendar year 1991. Payroll taxes amounting to \$77.9 billion, or 87.6 percent of total income to the fund, were collected during the year. Interest credits to the HI trust fund amounted to 10.7 percent of total income. The remaining 1.7 percent of calendar year 1991 income consisted mostly of a transfer from the railroad retirement program, transfers to and from the general fund of the Treasury, and premiums paid by voluntary enrollees.

The HI contribution rates applicable to taxable earnings are 1.45 percent for employees and employer each and 2.90 percent for self-employed. The maximum taxable amount of annual earnings for 1991 was \$125,000. After 1991, the automatic-adjustment provisions in section 230 of the Social Security Act determine the maximum taxable amount.

The adequacy of the HI program's scheduled financing to support program costs in the future is examined under three alternative sets of assumptions: optimistic, intermediate, and pessimistic. The intermediate set of assumptions represents the Trustees' best estimate of the expected future economic and demographic trends that will affect the financial status of the program. Under the intermediate set of assumptions (alternative II), the trust fund ratio,

## Overview

defined as the ratio of assets at the beginning of the year to disbursements during the year, is projected to increase to a level of 149 percent in 1993 and then decline steadily until the fund is completely exhausted in 2002. Under the more optimistic set of assumptions (alternative I), the trust fund ratio is projected to increase to 154 percent in 1994 and then decline until it is completely exhausted in 2009. Under the more pessimistic set of assumptions (alternative III), the trust fund ratio is projected to increase to a level of about 145 percent in 1993 and then decrease rapidly until the fund is exhausted in 2000. These projections serve to demonstrate that the HI program is severely out of financial balance using a range of plausible economic and demographic assumptions.

Table 4 in this report summarizes the estimated operations of the HI trust fund that have just been described under the three alternative sets of assumptions. As can be seen from Table 4, the Trustees' short-range test of financial adequacy, which is described in the "Expected Operations and Status of the Trust Fund" (section I.C.), is not met by the fund under the alternative II assumptions.

The adequacy of the current law financing schedule for the HI program on a long-range basis is measured by comparing on a year-by-year basis the tax rates specified by law with the corresponding incurred costs of the program, expressed as percentages of taxable payroll. However, the financial status of the program is often summarized, over a specific projection period, by a single measure known as the actuarial balance. The actuarial balance using the present value method is defined to be the difference in the sum of the present values of the tax rates for the valuation period over the sum of the present value of the cost rates (insured, incurred costs expressed as a percentage of taxable payroll) of the program for the same period, divided by the sum of the present values of the effective taxable payroll for the valuation period. The "Actuarial Status of the Trust Fund" (section I.D.) describes the method used to calculate summarized cost rates, tax rates, and actuarial balances. The HI trust fund does not meet the Trustees long-range test of financial adequacy, as discussed in section I.D., under any of the three sets of assumptions.

Table I presents a comparison of the projected experience contained in the 1991 and 1992 reports. As Table I indicates, the projections in the 1992 report show that the fund will be depleted earlier than in the 1991 report under all three sets of assumptions. The major reasons for this change are

the larger estimated disabled population and the lower estimated payroll taxes. Section I.D. discusses the reasons for the change in the actuarial balance.

**Table I. -- STATUS OF THE HOSPITAL INSURANCE TRUST FUND**

Sets of assumptions	Year in which the trust fund is exhausted as published in the		75-year actuarial balance of the HI program as published in the	
	1991 report	1992 report	1991 report	1992 report
I (optimistic)	2018	2009	-0.81%	-1.34%
II (intermediate)	2005	2002	-3.35	-4.20
III (pessimistic)	2001	2000	-8.03	-9.45

## 2. Conclusion of the Board of Trustees

Under the Trustees' Alternative II assumptions, the present financing schedule for the HI program is sufficient to ensure the payment of benefits over the next 10 years; however, the HI trust fund does not meet the Trustees' short-term test of financial solvency and the HI trust fund is projected to be exhausted in 2002. Under the more pessimistic alternative III, the fund is projected to be exhausted in 2000, approximately eight years from the present. Under the more optimistic alternative I, the trust fund is projected to be exhausted in 2009.

There are currently about four covered workers supporting each HI enrollee. This ratio will begin to decline rapidly early in the next century. By the middle of that century, there will be only about two covered workers supporting each enrollee. Not only are the anticipated reserves and financing of the HI program inadequate to offset this demographic change, but under all the assumptions, the trust fund is projected to become exhausted even before the major demographic shift begins to occur. As noted above, exhaustion of the fund is projected to occur shortly after the turn of the century under the intermediate assumptions, and could occur as early as 2000 if the pessimistic assumptions were to happen.

## *Overview*

The Trustees note that some steps have been taken to attempt to reduce the rate of growth in payments to hospitals, including the implementation of prospective payment and diagnosis-related groups. Initial experience under the prospective payment system for hospitals suggests that this payment mechanism may be an effective means of constraining the growth in hospital payments and improving the efficiency of the hospital industry. Nonetheless, projected costs for the HI program far exceed projected revenues over the 75-year long-range period. As a result, the HI program is severely out of financial balance.

The HI program is projected to increase from 1.3 percent of Gross Domestic Product (GDP) in CY 1991 to 4.7 percent of GDP in CY 2065. This rapid growth is attributable primarily to (1) increases in hospital admissions, and (2) increases in reported case mix. With the magnitude of the projected actuarial deficit in the HI program and the high probability that the HI trust fund will be exhausted shortly after the turn of the century, the Trustees urge the Congress to take additional actions designed to control HI program costs either through specific program legislation or as a part of enacting more comprehensive health care reform.

### ***B. THE BOARD OF TRUSTEES***

The Federal Hospital Insurance Trust Fund, established on July 30, 1965, is held by the Board of Trustees under the authority of section 1817(b) of the Social Security Act, as amended. The Board is composed of five members, three of whom serve in an ex officio capacity: the Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health and Human Services. The President nominated and the Senate confirmed Stanford G. Ross and David M. Walker to be the other two members, who serve as representatives of the public. Mr. Ross and Mr. Walker are serving 4-year terms that began on October 2, 1990.

By law, the Secretary of the Treasury is designated as the Board Chairperson and Managing Trustee, and the Administrator of the Health Care Financing Administration is designated as Secretary of the Board. The Board of Trustees reports to the Congress each year on the operation and status of the trust fund, in compliance with section 1817(b)(2) of the Social Security Act. This annual report, for 1992, is the 27th such report.

***C. EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND***

Table 1 shows the expected operations of the trust fund during fiscal years 1992 to 1994, together with the past experience of the program. The estimate shown in Table 1 is based on an intermediate set of assumptions labeled "Alternative II." This set of assumptions represents the Trustees' best estimate of the expected future economic and demographic trends that will affect the financial status of the program. The assumptions underlying the alternative II projections are presented in the technical section.

Income received through the financial interchange between the railroad retirement account and the trust fund under the provisions of the Railroad Retirement Act is estimated on the same basis as income from HI contributions. Estimates of the corresponding outgo are included in the disbursement items.

Estimated income to the trust fund which is appropriated from general revenues to reimburse the program for the cost of coverage of noninsured persons is the same as the estimates of disbursements incurred for such persons, net of corrections for differences between costs and amounts transferred for previous years. Premium income for other noninsured persons who may enroll in the HI program on a voluntary basis is estimated based on projected premium rates calculated according to statute and estimated average enrollment.

The transfers from general revenues for military wage credits are based on provisions of the Social Security Amendments of 1983 (Public Law 98-21), as described in the technical section.

The investment of new assets received during fiscal years 1992-94 is assumed to be in the form of special public-debt obligations bearing interest rates ranging from 6 percent to 6.75 percent, payable semiannually. The average effective annual rate of interest on the assets held by the HI trust fund on September 30, 1991, was 9.1 percent.

Disbursements for benefits are projected to increase in fiscal years 1992-94, primarily as a result of the increase in hospital payment rates and hospital admissions under the program. The expenditures for benefit payments shown

## *Overview*

in Table 1 differ from those shown in the 1993 Federal Budget. These estimates are based on more recent demographic and economic projections, and they do not reflect the implementation of proposed changes in regulations which were included in the budget. The expenditures for benefit payments shown in this section are based on the assumption that for fiscal years 1993 and later, the prospective payment rates will be increased in accordance with Public Law 101-508, the Omnibus Budget Reconciliation Act of 1990; for fiscal year 1992, the prospective payment rates have already been determined in accordance with the same statute.

The actual operations of the HI program are organized, in general, on a calendar year basis. Earnings subject to taxation and the applicable tax rates are established by calendar year, as are the inpatient hospital deductible and other cost-sharing amounts. The projected operations of the trust fund on a calendar year basis are shown in Table 2, according to the same assumptions as used in Table 1. The ratios of assets in the trust fund at the beginning of each calendar year to total disbursements during that year are shown in Table 3 for past years and as projected, under the same assumptions, through 1994.



**TABLE 1.—OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING FISCAL YEARS 1970-94**  
(In millions)

Fiscal year <sup>1</sup>	Income							Disbursements				Trust fund	
	Payroll taxes	Transfers from railroad retirement account	Reimbursement for uninsured persons	Premiums from voluntary enrollees	Payments for military wage credits	Interest and other income <sup>2</sup>	Total Income	Benefits Payments <sup>3</sup>	Administrative expenses <sup>4</sup>	Total disbursements	Interfund borrowing transfers <sup>5</sup>	Net increase in fund	Fund at end of year
<b>Historical Data:</b>													
1970	\$4,785	\$64	\$617	--	\$11	\$137	\$5,614	\$4,804	\$149	\$4,953	--	\$661	\$2,677
1975	11,291	132	481	\$6	48	609	12,568	10,353	259	10,612	--	1,956	9,870
1980	23,244	244	697	17	141	1,072	25,415	23,790	497	24,288	--	1,127	14,490
1981	30,425	276	659	21	141	1,341	32,863	28,907	353	29,260	--	3,603	18,093
1982	34,390	351	808	25	207	1,829	37,611	34,343	521	34,864	--	2,747	20,840
1983	36,387	358	878	26	3,663 <sup>6</sup>	2,629	43,940	38,102	522	38,624	-\$12,437	-7,121	13,719
1984	41,364	351	752	35	250	2,812	45,563	41,476	633	42,108	--	3,455	17,174
1985	46,490	371	766	38	86	3,182	50,933	47,841	813	48,654	1,824	4,103	21,277
1986	53,020	364	566	40	-714 <sup>7</sup>	3,167	56,442	49,018	667	49,685	10,613	17,370	38,648
1987	57,820	368	447	40	94	3,982	62,751	49,967	836	50,803	--	11,949	50,596
1988	61,901	364	475	42	80	5,148	68,010	52,022	707	52,730	--	15,281	65,877
1989	67,527	379	515	42	86	6,567	75,116	57,433	805	58,238	--	16,878	82,755
1990	70,655	367	413	113	107	7,908	79,563	65,912	774	66,687	--	12,876	95,631
1991	74,655	352	605	367	-1,011 <sup>8</sup>	8,969	83,938	68,705	934	69,638	--	14,299	109,930
<b>Estimates:<sup>9</sup></b>													
1992	79,785	370	621	494	85	10,070	91,425	76,560	1,059	77,619	--	13,806	123,736
1993	84,859	384	367	547	80	10,824	97,061	83,242	1,111	84,353	--	12,708	136,444
1994	90,296	382	293	608	75	11,378	103,032	91,917	1,187	93,104	--	9,928	146,372

<sup>1</sup>Fiscal year 1975 consists of the 12 months ending on June 30; fiscal years 1980 and later consist of the 12 months ending on September 30 of each year.

<sup>2</sup>Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and a small amount of miscellaneous income.

<sup>3</sup>Includes costs of Peer Review Organizations (beginning with the implementation of the Prospective Payment System on October 1, 1983).

<sup>4</sup>Includes costs of experiments and demonstration projects.

<sup>5</sup>A negative amount is a loan to the OASI trust fund; a positive amount is a repayment of loan principal to the HI trust fund.

<sup>6</sup>Includes the lump sum general revenue transfer of \$3,456 million, as provided for by section 151 of P.L. 98-21.

<sup>7</sup>Includes the lump sum general revenue adjustment of -\$805 million, as provided for by section 151 of P.L. 98-21.

<sup>8</sup>Includes the lump sum general revenue adjustment of -\$1,100 million, as provided for by section 151 of P.L. 98-21.

<sup>9</sup>Under alternative II.

NOTE: Totals do not necessarily equal the sums of rounded components.

**TABLE 2.—OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING CALENDAR YEARS 1970-94**  
(In millions)

Calendar year	Income							Disbursements				Trust fund	
	Payroll taxes	Transfers from railroad retirement account	Reimbursement for uninsured persons	Premiums from voluntary enrollees	Payments for military wage credits	Interest and other income <sup>1</sup>	Total income	Benefits Payments <sup>2</sup>	Administrative expenses <sup>3</sup>	Total disbursements	interfund borrowing transfers <sup>4</sup>	Net increase in fund	Fund at end of year
<b>Historical Data:</b>													
1970	\$4,881	\$66	\$863	--	\$11	\$158	\$5,979	\$5,124	\$157	\$5,281	--	\$698	\$3,202
1975	11,502	138	621	\$7	48	664	12,980	11,315	266	11,581	--	1,399	10,517
1980	23,848	244	697	18	141	1,149	26,097	25,064	512	25,577	--	521	13,749
1981	32,959	276	659	22	207	1,603	35,725	30,342	384	30,726	--	4,999	18,748
1982	34,586	351	808	24	207	2,022	37,998	35,631	513	36,144	-\$12,437	-10,583	8,164
1983	37,259	358	878	27	3,456 <sup>5</sup>	2,593	44,570	39,337	540	39,877	--	4,693	12,858
1984	42,288	351	752	33	250	3,046	46,720	43,257	629	43,887	--	2,834	15,691
1985	47,576	371	766	41	-719 <sup>6</sup>	3,362	51,397	47,580	834	48,414	1,824	4,808	20,499
1986	54,583	364	566	43	91	3,619	59,267	49,758	664	50,422	10,613	19,458	39,957
1987	58,648	368	447	38	94	4,469	64,064	49,496	793	50,289	--	13,775	53,732
1988	62,449	364	475	41	80	5,830	69,239	52,517	815	53,331	--	15,908	69,640
1989	68,369	379	515	55	86	7,317	76,721	60,011	792	60,803	--	15,918	85,558
1990	72,013	367	413	122	-993 <sup>7</sup>	8,451	80,372	66,239	758	66,997	--	13,375	98,933
1991	77,851	352	605	432	89	9,510	88,839	71,549	1,021	72,570	--	16,269	115,202
<b>Estimates:<sup>8</sup></b>													
1992	80,606	370	621	514	85	10,541	92,737	78,344	1,061	79,405	--	13,332	128,534
1993	85,914	384	367	558	80	11,210	98,513	85,239	1,128	86,367	--	12,146	140,680
1994	91,329	382	293	624	75	11,664	104,367	94,271	1,206	95,477	--	8,890	149,570

<sup>1</sup>Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and a small amount of miscellaneous income.

<sup>2</sup>Includes costs of Peer Review Organizations (beginning with the implementation of the Prospective Payment System on October 1, 1983).

<sup>3</sup>Includes costs of experiments and demonstration projects.

<sup>4</sup>A negative amount is a loan to the OASI trust fund; a positive amount is a repayment of loan principal to the HI trust fund.

<sup>5</sup>The lump sum general revenue transfer, as provided for by section 151 of P.L. 98-21.

<sup>6</sup>Includes the lump sum general revenue adjustment of -\$805 million, as provided for by section 151 of P.L. 98-21.

<sup>7</sup>Includes the lump sum general revenue adjustment of -\$1,100 million, as provided for by section 151 of P.L. 98-21.

<sup>8</sup>Under alternative II.

**NOTE:** Totals do not necessarily equal the sums of rounded components.

Overview

**TABLE 3. -- RATIO OF ASSETS IN THE FUND AT THE BEGINNING OF THE YEAR TO DISBURSEMENTS DURING THE YEAR FOR THE HOSPITAL INSURANCE TRUST FUND**

Calendar Year	Ratio
Historical Data:	
1967	28%
1968	25
1969	43
1970	47
1971	54
1972	47
1973	40
1974	69
1975	79
1976	77
1977	66
1978	57
1979	54
1980	52
1981	45
1982	52
1983	20
1984	29
1985	32
1986	41
1987	79
1988	101
1989	115
1990	128
1991	136
Estimates <sup>1</sup> :	
1992	145
1993	149
1994	147

<sup>1</sup>Under alternative II.

Since future economic, demographic, and health care usage and cost experience may differ considerably from the intermediate assumptions on which the cost estimates were based, projections have also been prepared on the basis of two different sets of assumptions labeled "Alternative I" and "Alternative III." The assumptions used in preparing projections under alternatives I and III, as well as under alternative II, are discussed in the technical section.

The three alternative sets of assumptions were selected in order to indicate the general range in which the cost of the program reasonably might be expected to fall. The alternative I assumptions are more optimistic than the alternative II assumptions, resulting in a lower average cost over the projection period and enhanced trust fund solvency. The alternative III assumptions are more pessimistic than the alternative II assumptions, resulting in a higher average cost over the projection period and less trust fund solvency. Thus alternative III reflects the possible impact, in the near future, of conditions which are significantly more adverse than those assumed under the intermediate assumptions. Alternatives I and III provide for a fairly wide range of possible experience. Actual experience reasonably may be expected to fall within the range, but no assurance can be made that this will be the case, particularly in light of the wide variations in experience that have occurred since the beginning of the program. The projected trust fund development under alternative III also provides a measure of the strength of the financing of the program. An adequate financing schedule ought to be sufficiently strong to withstand, for a reasonable period of time, conditions in the general economy and in the hospital sector which are substantially more adverse than anticipated under alternative II.

The estimated operations of the HI trust fund during calendar years 1991-2009, on a cash basis for all program income and disbursements, are summarized in Table 4 for all three alternatives. Under alternative II, the trust fund as a percent of a year's disbursements (trust fund ratio) is projected to increase to a level of 149 percent in 1993 and then decline steadily until it is completely exhausted in 2002. Under alternative I, the trust fund ratio is projected to increase to 154 percent in 1994 and then decline until it is exhausted in 2009. Under alternative III, the trust fund ratio is projected to increase to a level of about 145 percent in 1993 and then decrease rapidly until the fund is exhausted in 2000. These projections do not reflect any reduction in disbursements due to proposed changes in legislation or regulation which were included in the 1993 Federal Budget but which have not been enacted or implemented.

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**TABLE 4. – ESTIMATED OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING CALENDAR YEARS 1991-2009, UNDER ALTERNATIVE SETS OF ASSUMPTIONS**

(Dollar amounts in billions)

Calendar Year	Total Income	Total disbursements	Net Increase in fund	Fund at end of year	Ratio of assets to disbursements <sup>1</sup> (percent)
<b>ALTERNATIVE I:</b>					
1991 <sup>2</sup>	\$88.8	\$72.6	\$16.3	\$115.2	136
1992	93.4	79.3	14.1	129.3	145
1993	100.0	85.5	14.6	143.8	151
1994	106.8	93.5	13.3	157.1	154
1995	113.4	102.1	11.3	168.4	154
2000	149.7	151.5	-1.8	186.2	124
2005	187.0	206.1	-19.1	127.7	71
2009	221.8	264.6	-42.8	(3)	15
<b>ALTERNATIVE II:</b>					
1991 <sup>2</sup>	\$88.8	\$72.6	\$16.3	\$115.2	136
1992	92.7	79.4	13.3	128.5	145
1993	98.5	86.4	12.1	140.7	149
1994	104.4	95.5	8.9	149.6	147
1995	110.1	105.5	4.6	154.2	142
1996	116.2	117.4	-1.1	153.0	131
1997	122.1	129.2	-7.0	146.0	118
1998	128.1	141.6	-13.5	132.5	103
1999	133.9	155.2	-21.3	111.2	85
2000	139.8	170.0	-30.2	81.0	65
2001	145.5	184.5	-39.0	42.0	44
2002	149.0	200.3	-51.3	(4)	21
<b>ALTERNATIVE III:</b>					
1991 <sup>2</sup>	\$88.8	\$72.6	\$16.3	\$115.2	136
1992	92.2	79.6	12.6	127.8	145
1993	98.3	88.4	9.9	137.7	145
1994	105.7	100.7	5.0	142.7	137
1995	112.2	113.8	-1.6	141.1	125
1996	115.7	127.2	-11.5	129.6	111
1997	121.6	142.8	-21.2	108.3	91
1998	127.3	160.1	-32.9	75.5	68
1999	131.7	178.9	-47.3	28.2	42
2000	135.7	199.9	-64.2	(5)	14

<sup>1</sup>Ratio of assets in the fund at the beginning of the year to disbursements during the year.

<sup>2</sup>Figures for 1991 represent actual experience.

<sup>3</sup>Trust fund depleted in calendar year 2009.

<sup>4</sup>Trust fund depleted in calendar year 2002.

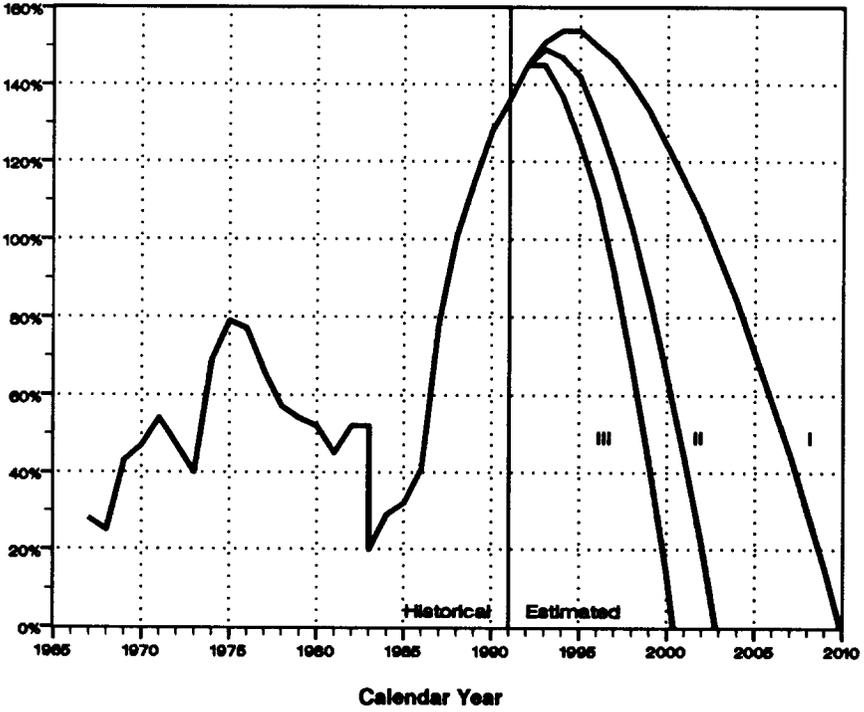
<sup>5</sup>Trust fund depleted in calendar year 2000.

**NOTE:** Totals do not necessarily equal the sums of rounded components.

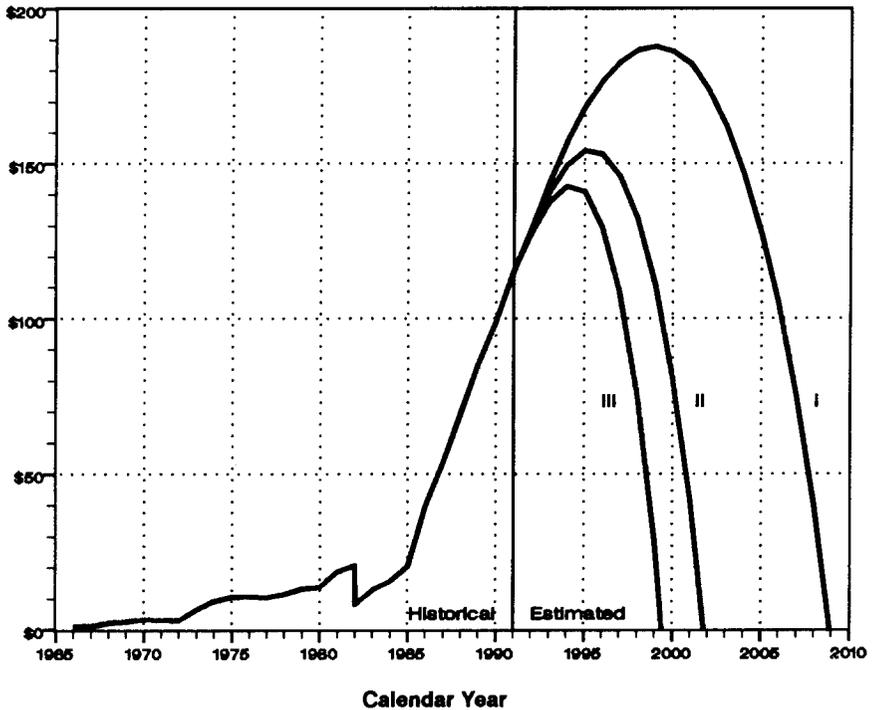
In order to meet the test of financial adequacy in the short-range projection period, the ratio of estimated assets in the trust fund at the beginning of the year to estimated disbursements during that year must either (a) be at least 100 percent throughout the 10-year projection period, or (b) reach a level of 100 percent within five years and remain at or above 100 percent throughout the remainder of the 10-year period. In addition, the fund's estimated assets at the beginning of each month of the 10-year period must be sufficient to cover that month's estimated disbursements. This test is applied to the estimates under alternative II for the period 1992-2001. Failure of the trust fund to meet this test is an indication that the solvency of the program over the next 10 years is in question and that action is needed to improve the short-range financial adequacy of the program. As can be seen from Table 4, this short-range test is not met under the alternative II assumptions. The trust fund ratio falls below the 100 percent level in seven years and is exhausted just after the 10-year period.

Figure 1 shows historical trust fund ratios for recent years and projected ratios under the three sets of assumptions. Figure 2 shows end-of-year trust fund balances for recent historical years and for projected years under the three sets of assumptions.

Figure 1. SHORT-TERM HI TRUST FUND RATIOS



**Figure 2. HI TRUST FUND BALANCE, END-OF-YEAR (in \$ Billions)**



***D. ACTUARIAL STATUS OF THE TRUST FUND***

In the previous section, entitled "Expected Operations and Status of the Trust Fund" (I.C.), the expected operations of the HI program over the short-term period were presented. In addition, the actuarial status of the trust fund, or the adequacy of the scheduled financing to support program costs well into the future, is examined, under all three alternative assumptions. The assumptions used in preparing projections under all three alternative sets of assumptions are summarized in the technical section.

The adequacy of the current law financing schedule for the HI program on a long-range basis is measured by comparing on a year-by-year basis the tax rates specified by law with the corresponding incurred costs of the program, expressed as percentages of taxable payroll. If these two items are exactly

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equal in each year of the projection period and all projection assumptions are realized, tax revenues will be sufficient to provide for program costs. In practice, however, tax rate schedules generally are designed with rate changes occurring only at intervals of several years, rather than with continual yearly increases to match exactly with projected cost increases. To the extent that small differences between the yearly costs of the program and the corresponding tax rates occur for short periods of time and are offset by subsequent differences in the reverse direction, the substance of the financing objectives will have been met. In projecting costs under the program, only incurred expenditures (benefits and administrative costs) attributable to insured beneficiaries are considered, since benefits and administrative costs for noninsured persons are expected to be financed through general revenue transfers and premium payments rather than through payroll taxes.

The historical costs of the HI program, expressed as percentages of taxable payroll, are shown in Table 5. The ratio of expenditures to taxable payroll has increased from 0.94 percent in 1967 to 2.64 percent in 1991, reflecting both the higher rate of increase in program costs than in earnings subject to HI taxes and the extension of HI benefits to disabled and end-stage renal disease beneficiaries. The projected costs of the program under alternative II, expressed as percentages of taxable payroll, and the tax rates scheduled under current law for selected years over the 75-year period 1992-2066, are shown in Table 6. Further increases in the ratio of expenditures to taxable payroll under alternative II result from the projection that the cost of the HI program will continue to increase at a higher rate than taxable earnings, as discussed later in this section. It can be seen from the selected years shown in Table 6 that, on a year-by-year basis, the tax rates specified by current law are insufficient to support the projected costs of the current program. As a result, the program is severely out of financial balance and actions will need to be taken to increase revenues and/or reduce expenditures.

**TABLE 5. – COST OF THE HOSPITAL INSURANCE PROGRAM, EXPRESSED AS A PERCENT OF TAXABLE PAYROLL**

Calendar year	Expenditures under the program <sup>1</sup>
1967	0.94%
1968	1.04

**TABLE 5. -- COST OF THE HOSPITAL INSURANCE PROGRAM, EXPRESSED AS A PERCENT OF TAXABLE PAYROLL**

Calendar year	Expenditures under the program <sup>1</sup>
1969	1.12
1970	1.20
1971	1.32
1972	1.30
1973	1.33
1974	1.42
1975	1.69
1976	1.83
1977	1.95
1978	2.01
1979	1.99
1980	2.20
1981	2.39
1982	2.65
1983	2.67 <sup>2</sup>
1984	2.64
1985	2.63
1986	2.54
1987	2.51
1988	2.52
1989	2.65
1990	2.69
1991	2.64

<sup>1</sup>Estimated costs attributable to insured beneficiaries only, on an incurred basis. Benefits and administrative costs for noninsured persons are expected to be financed through general revenue transfers and premium payments, rather than through payroll taxes. Gratuitous credits for military service after 1956 are included in taxable payroll.

<sup>2</sup>Deemed credits for military service before 1984 were attributed to the year in which such service had occurred. If all such credits had been attributed in 1983, expenditures under the program in 1983 would have been lower by 0.18 percent of taxable payroll.

**TABLE 6. -- COST AND TAX RATES OF THE HOSPITAL INSURANCE PROGRAM, EXPRESSED AS A PERCENT OF TAXABLE PAYROLL<sup>1</sup>**

Calendar Year	Expenditures under the program <sup>2</sup>	Tax rates scheduled in the law <sup>3</sup>	Difference <sup>4</sup>
1992	2.80%	2.90%	0.10%
1993	2.91	2.90	-0.01
1994	3.05	2.90	-0.15
1995	3.18	2.90	-0.28
2000	3.76	2.90	-0.86

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**TABLE 6. -- COST AND TAX RATES OF THE HOSPITAL INSURANCE PROGRAM, EXPRESSED AS A PERCENT OF TAXABLE PAYROLL <sup>1</sup>**

Calendar Year	Expenditures under the program <sup>2</sup>	Tax rates scheduled in the law <sup>3</sup>	Difference <sup>4</sup>
2005	4.28	2.90	-1.38
2010	4.87	2.90	-1.97
2015	5.75	2.90	-2.85
2020	6.58	2.90	-3.68
2025	7.63	2.90	-4.73
2030	8.62	2.90	-5.72
2035	9.29	2.90	-6.39
2040	9.71	2.90	-6.81
2045	9.94	2.90	-7.04
2050	10.13	2.90	-7.23
2055	10.41	2.90	-7.51
2060	10.82	2.90	-7.92
2065	11.27	2.90	-8.37
2066	11.35	2.90	-8.45

<sup>1</sup>Under Alternative II.

<sup>2</sup>Estimated costs attributable to insured beneficiaries only, on an incurred basis, under alternative II. Benefits and administrative costs for noninsured persons are expected to be financed through general revenue transfers and premium payments, rather than through payroll taxes. Gratuitous credits for military service after 1956 are included in taxable payroll.

<sup>3</sup>Rates for employees and employers combined.

<sup>4</sup>Difference between the tax rate scheduled in the law and program expenditures.

While the year-by-year comparisons discussed are necessary to measure the adequacy of the financing of the HI program, the financial status of the program is often summarized, over a specific projection period, by a single measure known as the actuarial balance. The actuarial balance of the HI program is defined to be the difference in the summarized tax rate for the valuation period over the summarized cost rate (insured, incurred costs expressed as a percentage of taxable payroll) of the program for the same period. The present-value method is used to calculate summarized cost rates, tax rates, and actuarial balances in this report, unless otherwise indicated. This approach is the same as that used in the OASDI report. Under the present-value method, the summarized tax rates, cost rates, and actuarial balance are based upon the present values of future income attributable to taxes on an incurred basis, future insured costs on an incurred basis, and future taxable payroll. The present values are calculated by discounting the future annual amounts, at the assumed rates of interest credited to the HI

trust fund, to the beginning of the valuation period. The summarized tax and cost rates over the projection period are then obtained by dividing the present value of the taxable payroll into the present values of tax income and cost, respectively. The difference between the summarized tax rate and cost rate over the long-range projection period, after an adjustment to take into account the fund balance at the valuation date and any target trust fund at the end of the valuation period, is computed to obtain the actuarial balance. In keeping with a decision by the Board of Trustees that it is advisable to maintain a balance in the trust fund equal to a minimum of one year's expenditures, the target trust fund balance is equal to the following year's estimated costs at the end of the 75-year projection period. It should be noted that projecting an end-of-period target trust fund balance does not necessarily insure that the trust fund will maintain such a balance on a year-by-year basis.

Calculating the fund balance under the present-value method is a convenient, generally accepted way of summarizing actuarial status. When the program is in long-run deficit, the actuarial balance computed under the present-value method can be interpreted as the percentage that must be permanently added to current law tax rates or subtracted from cost rates, throughout the entire valuation period, in order that the financing cover all projected program costs and provide for the targeted trust fund balance at the end of the projection period. This actuarial deficit under alternative II assumptions is 4.2 percent of taxable payroll. However, if no changes were made until the trust fund falls below the 100 percent level recommended by the Board of Trustees, the actuarial deficit would be 4.65 percent of taxable payroll. If no changes were made until the year the trust fund will be exhausted, the actuarial deficit would be 5.08 percent of taxable payroll. The OASDI report also employs the present-value method for summarizing the long-term financial status of the Social Security program. An alternative way of calculating actuarial status, the modified average-cost method, is presented in the technical section.

The actuarial balances under all three alternative sets of assumptions, for the first 25-year period, the first 50-year period, the entire 75-year period 1992-2066, and for each 25-year subperiod, are shown in Table 7. The summarized tax rate for the entire 75-year period is 2.90 percent. The summarized cost of the program under alternative II, for the entire 75-year period, is 7.10 percent of taxable payroll. As a result, the trust fund does not meet the long-range test of financial adequacy, which is described in the OASDI report and the Glossary of this report, under any of the three assumption sets.

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**TABLE 7. – ACTUARIAL BALANCES OF THE HOSPITAL INSURANCE PROGRAM, UNDER ALTERNATIVE SETS OF ASSUMPTIONS**

	Alternative		
	I	II	III
<b>Projection periods:</b>			
1992-2016:			
Summarized tax rate <sup>1</sup>	2.90%	2.90%	2.90%
Summarized cost rate <sup>2</sup>	3.32	4.25	5.52
Actuarial balance <sup>3</sup>	-0.42	-1.35	-2.62
1992-2041:			
Summarized tax rate <sup>1</sup>	2.90	2.90	2.90
Summarized cost rate <sup>2</sup>	3.84	6.00	9.78
Actuarial balance <sup>3</sup>	-0.94	-3.10	-6.88
1992-2066:			
Summarized tax rate <sup>1</sup>	2.90	2.90	2.90
Summarized cost rate <sup>2</sup>	4.24	7.10	12.35
Actuarial balance <sup>3</sup>	-1.34	-4.20	-9.45
<b>25-year subperiods:</b>			
1992-2016:			
Summarized tax rate <sup>1</sup>	2.90%	2.90%	2.90%
Summarized cost rate <sup>4</sup>	3.34	4.20	5.36
Actuarial balance <sup>3</sup>	-0.44	-1.30	-2.46
2017-2041:			
Summarized tax rate <sup>1</sup>	2.90	2.90	2.90
Summarized cost rate <sup>4</sup>	4.47	8.12	14.89
Actuarial balance <sup>3</sup>	-1.57	-5.22	-11.99
2042-2066:			
Summarized tax rate <sup>1</sup>	2.90	2.90	2.90
Summarized cost rate <sup>4</sup>	5.33	10.41	20.50
Actuarial balance <sup>3</sup>	-2.43	-7.51	-17.60

<sup>1</sup>As scheduled under present law.

<sup>2</sup>Expenditures for benefit payments and administrative costs for insured beneficiaries, on an incurred basis, expressed as a percentage of taxable payroll, computed on the present-value basis, including the cost of attaining a trust fund balance at the end of the period equal to 100% of the following year's estimated expenditures, and including an offset to cost due to the beginning trust fund balance.

<sup>3</sup>Difference between the summarized tax rate (as scheduled under present law) and the summarized cost rate.

<sup>4</sup>Expenditures for benefit payments and administrative costs for insured beneficiaries, on an incurred basis, expressed as a percentage of taxable payroll, computed on the present-value basis. Includes neither the trust fund balance at the beginning of the period nor the cost of attaining a non-zero trust fund balance at the end of the period.

The divergence in outcomes among the three alternatives is reflected both in the estimated operations of the trust fund on a cash basis (as discussed in section I.C.) and in the 75-year summarized costs. The variations in the underlying assumptions, as shown in the technical section, can be characterized as (1) moderate in terms of magnitude of the differences on a year-by-year basis, and (2) persistent over the duration of the projection period. During the first 25-year projection period, under the intermediate assumptions, program expenditures are projected to increase faster than taxable payroll, at a rate which gradually declines to about 2.5 percent more per year than taxable payroll by 2010. However, program expenditures are expected to grow at a rate over 3 percent more than taxable payroll for alternative II in 2016, the last year of the first 25-year projection period. This is just after the major demographic shift, as described below, begins. Under alternative I, program expenditures are also projected to increase faster than taxable payroll, but at a somewhat lower rate, which gradually declines to about one percent more per year than taxable payroll by 2010; the rate then increases, reaching about 1.5 percent more per year than taxable payroll in 2016. Similarly, alternative III follows a pattern whereby program expenditures initially increase faster than taxable payroll and at a somewhat higher rate than the intermediate assumptions, gradually declining to about 4.5 percent more than taxable payroll by 2010, and then increasing to about 5 percent more than taxable payroll in 2016. Past experience has indicated that conditions producing results as adverse as those under alternative III can occur. In view of this and because of the wide range of possible experience, it is important that a balance be maintained in the HI trust fund as a reserve for contingencies.

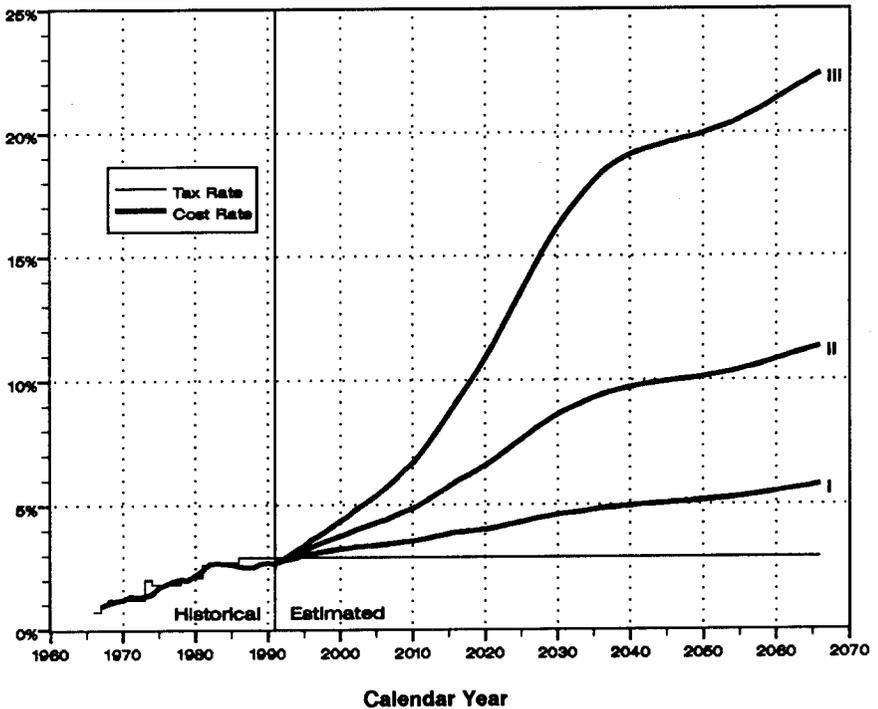
A valuation period of 75 years is needed to present fully the future contingencies that reasonably may be expected to occur, such as the impact of the large shift in the demographic composition of the population which occurs after the turn of the century. As Table 6 indicates, estimated expenditures under the program, expressed as percentages of taxable payroll, increase rapidly during the second 25 years of the projection period. This rapid increase in costs occurs because the relatively large number of persons born during the period between the end of World War II and the early 1960's (known as the "baby boom") will reach retirement age and begin to receive benefits, while the relatively small number of persons born during later years will comprise the labor force. During the last 25 years of the projection period, the projected increases in expenditures under the program stabilize.

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Costs beyond the initial 25-year projection period for alternative II are based upon the assumption that costs per unit of service will increase at the same rate as average hourly earnings increase. Thus, changes in the last fifty years of the projection period primarily reflect the impact of the changing demographic composition of the population. Costs beyond the initial 25-year projection period for alternatives I and III begin by assuming that program cost increases, relative to taxable payroll increases, are approximately two percent less rapid and two percent more rapid, respectively, than the results under the intermediate assumptions. The two percent differentials gradually decrease until the year 2041 when program cost increases, relative to taxable payroll, are approximately the same as under the intermediate assumptions.

Figure 3 shows the year-by-year costs as a percent of taxable payroll for each of the three sets of assumptions, as well as the scheduled tax rates. Figure 3 illustrates the magnitude of the projected financial imbalance in the HI program by displaying the divergence of the program costs and scheduled tax rates under each set of assumptions.

**Figure 3. ESTIMATED HI COSTS AND TAX RATES AS PERCENT OF TAXABLE PAYROLL**



The 75-year actuarial balance of the HI program, under alternative II, is estimated to be -4.20, as shown in Table 7. The actuarial balance under alternative II as reported in the 1991 Annual Report was -3.35. The major reasons for the change in the 75-year actuarial balance are summarized in table 6. In more detail, these changes are:

- (1) Changes in valuation period: Deletion of 1991 and the addition of 2066 to the 75-year projection period substitutes a deficit year for a surplus year with respect to the operations of the HI trust fund. The net effect on the actuarial balance is -0.08.
- (2) Home Health Assumptions: Changes in the home health assumptions described in the technical section result in a -0.25 change in the actuarial

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balance. The primary factors contributing to the change are significantly higher recent trends in utilization and slightly higher increases in reimbursement per visit.

- (3) Economic and demographic assumptions: Changes in the economic and demographic assumptions described in the technical section result in a -0.15 change in the actuarial balance. Projections of the population covered by the program are higher than in the 1991 report, while the effects of most economic assumptions are lower.
- (4) Updating the projection base: The cost as a percent of payroll for 1991 was slightly more than estimated in the 1991 report. The net effect of this change on the actuarial balance is -0.05.
- (5) Hospital assumptions: Changes in the hospital assumptions described in the technical section result in a -0.32 change in the actuarial balance. The primary factor contributing to the change is the use of average hourly earnings instead of wages to increase payments per admission in the last 50 years of the projection period.

**TABLE 8. – CHANGE IN THE 75-YEAR ACTUARIAL BALANCE SINCE THE 1991 REPORT**

1. Actuarial balance, alternative II, 1991 report	-3.35%
2. Changes:	
a. Valuation period	-0.08
b. Base estimate	-0.05
c. Home health assumptions	-0.25
d. Economic and demographic assumptions	-0.15
e. Hospital assumptions	-0.32
f. Net effect, above changes	-0.85
3. Actuarial balance, alternative II, 1992 report	-4.20

## E. CONCLUSION

The balance in the Federal Hospital Insurance Trust Fund at the beginning of 1992 was 136 percent of estimated outgo for calendar year 1992, above the minimum 100 percent level recommended by the Board of Trustees. The tax rates specified in the law are sufficient, along with interest earnings and assets in the fund, to support program expenditures only over the next 10 years, under the Trustees' intermediate assumptions. However, the trust fund does not meet the short-range test of financial adequacy, which was described in a previous section of this report. Any significant adverse deviation from these

projections could result in the inability of the fund to meet its obligations much sooner than projected.

Over the 75-year projection period, the tax rate necessary to provide for benefits and administrative expenses far exceeds the tax rate scheduled in the law in most years. The actuarial balance, as defined in the previous section (that is, including the cost of attaining a trust fund balance at the end of the period equal to 100% of the following year's estimated expenditures, and including an offset to cost due to the beginning trust fund balance), is -1.35 for the first 25-year projection period, -3.10 for the first 50-year projection period, and -4.20 over the entire 75-year projection period, under the alternative II assumptions. The actuarial balances for the 25-year subperiods, as defined in the previous section (that is, including neither the trust fund balance at the beginning of the period nor the cost of attaining a non-zero trust fund balance at the end of the subperiod), are -1.30, -5.22, and -7.51 for the first, second, and third 25-year subperiods, respectively, under the alternative II assumptions. The trust fund does not meet the Trustees' long-range test of financial adequacy, which is defined in the OASDI report and the Glossary of this report, under any of the three assumption sets. In order to bring the HI program into actuarial balance even for the first 25-year projection period under the alternative II assumptions, either outlays will have to be reduced by 32 percent or income increased by 47 percent (or some combination thereof).

There are currently about four covered workers supporting each HI enrollee. This ratio will begin to decline rapidly early in the next century. By the middle of that century, there will be only about two covered workers supporting each enrollee. As the post-World War II "baby boom" becomes eligible for benefits, the annual rate of increase in program costs as a percentage of taxable payroll rises substantially, from 2.5 percent in 2010 to 3.4 percent in 2015 under alternative II. Not only are the anticipated reserves and financing of the HI program inadequate to offset this demographic change, but under all the assumptions, the HI trust fund is projected to become exhausted even before the major demographic shift begins to occur. Exhaustion is projected to occur shortly after the turn of the century, in 2002 under the alternative II assumptions, and could occur as early as 2000 if the pessimistic assumptions were to happen.

The Trustees note that some steps to attempt to reduce the rate of growth in payments to hospitals have been taken, including the implementation of

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prospective payment and diagnosis-related groups. Initial experience under the prospective payment system for hospitals suggests that this payment mechanism may be an effective means of constraining the growth in hospital payments and improving the efficiency of the hospital industry. Nonetheless, projected costs for the HI program far exceed projected revenues over the 75-year long-range period. As a result, the HI program is severely out of financial balance.

The HI program is projected to increase from 1.3 percent of GDP in CY 1991 to 4.7 percent of GDP in CY 2065. This rapid growth is attributable primarily to (1) increases in hospital admissions, and (2) increases in reported case mix. With the magnitude of the projected actuarial deficit in the HI program and the high probability that the HI trust fund will be exhausted shortly after the turn of the century, the Trustees urge the Congress to take additional actions designed to control HI program costs either through specific program legislation or as a part of enacting more comprehensive health care reform.